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### Analysis of The Competitive Performance of Egyptian Dates in Global Markets in Light of An Extension Strategy to Develop Agricultural Extension Performance for The Production And Circulation of Egyptian Dates (A Case Study in The New Valley Governorate)

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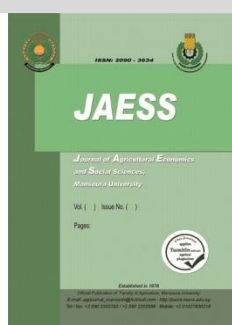
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#### ABSTRACT

The date palm is one of the fruit trees that can be benefited from economically and has the possibility of exporting, manufacturing and increasing family income in its production areas in Egypt. The research aims to analyze the productive, competitive and indicative performance of Egyptian dates. To find out the strengths, maintain and develop them, A review of the most important indicators of the competitiveness of Egyptian dates showed that the apparent comparative advantage index increased in value from the correct one in the average period (2015-2020) estimated at about 5.55%, which means that Egyptian date exports enjoy a comparative advantage in global markets. The export efficiency of Egyptian dates during the period (2015-2020) was greater than 100%, as the annual average of export efficiency amounted to about 384.3%, which indicates the presence of export efficiency for Egyptian dates, and the results indicated that Egypt's share in the Indonesian market amounted to about 40.63%, While it amounted to about 0.02% in the Moroccan market, and about 12.22% in the Malaysian market, during the average period (2015-2020). Date producer. The results were shown the total performance level of the agricultural extension workers surveyed for the extension activities related to them in promoting the production and circulation of Egyptian dates, that (26.7%) of the respondents had a low level of performance for extension activities related to this item, while (40%) of them had a medium level of performance, and it was found that (33.3%) of the respondents had a high level of performance.

**Keywords:** Competitive analysis - apparent comparative advantage - market share – market penetration coefficient - performance of mentors



#### INTRODUCTION

Date production is a global agricultural industry; About 5.4 million tons are produced from the date crop, which is one of the traditional crops in the ancient world, and the countries producing this crop are located in the Middle East and North Africa, and there are many other date-producing countries, namely: Algeria, the United Arab Emirates, and Sudan The Sultanate of Oman and Morocco, and with the increase in the number of date-producing countries, the percentage of production of dates increased to about 90% (<http://faostat.fao.org>).

This sector has a comparative advantage and a great opportunity for development and value addition; It is characterized by high production and low production costs when compared to other countries such as Tunisia, Saudi Arabia and Algeria. The different climatic zones in Egypt allow the cultivation of a wide range of varieties and diversity and provide the opportunity to produce better quality by focusing on semi-dry varieties for both the local market and for export, as well as introducing the new varieties required in international markets.

The date palm is expected to occupy a leading position in the agricultural sector in Egypt, due to its excellent ability to adapt to difficult climatic conditions, its traditional use as food, the diversity of its by-products from waste, and

its environmental benefit in agriculture in the many oases in Egypt.

Despite the challenges facing the sector related to technical aspects and post-harvest techniques, the lack of economic size of the farm and the weak link between agricultural extension and development research, in addition to the large fluctuation of prices locally, weak marketing information, weak infrastructure and the high rate of post-harvest losses, but the opportunity Available and large enough for Egypt's dates to take their place, which is in line with the large volume of their production and competing with the best varieties in the global market, This is in conjunction with the efforts made to advance the dates sector and increase the added value and exports of the sector to international markets, in coordination between the Egyptian Ministry of Trade and Industry, the Egyptian Ministry of Agriculture and Land Reclamation, the Khalifa International Award for Date Palm and Agricultural Innovation, and the Food and Agriculture Organization of the United Nations (FAO). This is evident from President Abdel Fattah El-Sisi's interest in sponsoring the Egyptian Dates Festival for the fourth year in a row, with the aim of enhancing Egypt's production capabilities of dates at the local and international levels, and thus the need to prepare for it through the establishment of the largest date farm in the world (the model farm) in the East El Oweinat region, which includes

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2.5 million A palm for the finest types of dates, and this model farm will be in which a number of filling stations will be established in the production areas and factories will be established for the manufacture of second-class dates, which are not exported in their condition to maximize their added value and include them in multiple industrial products.

As the project apparatus will plant 2.5 million palm trees for varieties needed abroad. It has a high price value equivalent to 5 times the current ton price in Egypt, as only 16% of our production is semi-dry varieties and there is an expansion in the cultivation of the varieties required for export, including the Medjool dates and Barhi dates, which are rare varieties in Egypt. The varieties that we produce in Egypt currently are not marketing, that is, not required for export, but what will be planted in the coming period in the 2.5 million palm tree project are varieties that have a great external demand, especially in Europe.

The Arab Republic of Egypt is the largest date producing country in the world, as it is the world leader in the production and cultivation of dates, with its production of dates reaching about 1,084,529 tons, Which constitutes more than 18% of the global production of dates, but represents only 3% of date exports around the world, and it is reported that the country has increased the cultivation of dates by more than 100%; Since 1993, Currently, Egypt has about 15,582,000 palm trees ( UN COMTRADE statistics ) .

The State of Morocco imports more than half, equivalent to about 53% of the Egyptian dates exported. Followed by Indonesia (24%) and Malaysia (15%), bringing the total value of exports to about \$41.8 million. It is considered one of the main nutrients for its people, who are always keen to learn about the calorie table in types of dates. Therefore, the dates sector is one of the most promising sectors that can contribute to the advancement of the Egyptian economy[www.comtrade.un.org].

#### **Research problem:**

Although Egypt occupies the first place in the world in the production of dates with 18% of the global production of dates, the share of its exports in international markets is only about 3% of global exports, which calls for the need to develop Egypt's competitive position in international markets by measuring the competitiveness of Egyptian dates exports and the development of knowledge of export methods, which requires the development of a strategy for the indicative performance ( Guidance performance) of the production and circulation of Egyptian dates by identifying the most important problems that impede the advancement of product quality and suitability to the taste of the external consumer and the development of exports of Egyptian dates.

#### **Research Objective:**

The research aims to analyze the productive, competitive and indicative performance of Egyptian dates. To find out the strengths, maintain and develop them, identify the weaknesses and shortcomings that led to it, and suggest methods that can be followed to develop exports of Egyptian dates in the future, and the main objective of the study will be achieved by identifying As follows :

1. The reality of global and local production of dates and the development of the area, productivity and production of date palms in Egypt and the world.

2. Studying the geographical distribution of Egyptian exports of dates, and estimating some indicators of export competitiveness in the most important markets.
3. The competitive position of Egyptian dates in the most important global markets through the current situation of Egyptian dates exports in foreign markets, the apparent comparative advantage, price competitiveness compared to the most important exporting countries and the rate of market penetration and accessible markets.
4. Analyzing the performance of those in charge of agricultural extension in supporting farmers and providing them with production, marketing and export knowledge to develop the competitive position of Egyptian dates in international markets through:
  - A - Identifying some of the personal and professional characteristics of the respondents in the agricultural extension work in the research area.
  - B - Identifying the performance level of the agricultural extension agents surveyed for the extension activities related to promoting the production and circulation of Egyptian dates in the research area.
- c- Determining the extent of the independence of the relationship between the performance level of the agricultural extension agents surveyed for the extension activities related to the advancement of the production and circulation of Egyptian dates and the studied independent variables.
5. Identifying the most important problems and obstacles facing agricultural extension workers when they perform their role in promoting the production and circulation of Egyptian dates and their proposals to solve them in the research area.

#### **Procedural definitions used in the study:**

- **The performance of agricultural extension agents:**It is intended in this research the degree to which agricultural extension agents implement the extension tasks and activities related to the advancement of Egyptian dates.
- **Extension activities:** It is intended in this research the efforts exerted by agricultural extension agents in urging, directing, educating, training and encouraging farmers regarding the items of knowledge, information and technical recommendations for the sub-items to promote the production and circulation of Egyptian dates, which are: providing farmers with knowledge and production information, providing farmers with knowledge and marketing information, extending The farmers with knowledge and information in the field of combating the most important pests that affect the date palm. Providing the grower with knowledge and information to solve the problems they face during the production and marketing of the date crop.

#### **Research method and data sources:**

The research used the descriptive and quantitative analysis method, where the general time trend model was used to measure the development of the various variables in the research, and some export competitive performance indicators were used, such as the apparent comparative advantage, the price competitiveness index and the market penetration rate index. The Central Administration of Agricultural Economy and the Use of the Internet - Secondary for the period (for international organizations such as the Food and Agriculture Organization of the United

Nations, FAO, Trade Map Statistics, and UN COMTRADE Statistics, and many research and studies related to the subject of the research were used, the data of this research has been analyzed by computer using a statistical program For the social sciences (SPSS), some statistical methods were also used in data analysis, such as: the tabular display by frequency and percentages in describing the personal and professional characteristics of the respondents, arithmetic mean, standard deviation, and standard degree. Guidelines related to promoting the production and circulation of Egyptian dates And some of their studied characteristics.

#### **Fields of study:**

##### **A- Geographical area:**

This research was conducted in the New Valley Governorate, as it is the largest governorate in the cultivation of date palms, where the New Valley Governorate is the largest governorate in terms of area and numbers of date palms, and the semi-dry date palm varieties are concentrated in it, and the governorate is witnessing a remarkable activity in agricultural horizontal expansion projects. Most of these projects focus on date palm cultivation as one of the strategic crops, and this governorate has enjoyed a comparative advantage in the cultivation of date palms, especially the dry and semi-dry varieties, which represent an important economic and social dimension for many social groups in this governorate.

##### **B- human field:**

The comprehensive research reached 71 respondents in the governorate of those in charge of agricultural extension work from the engineers in the Agricultural Administration, the Agricultural Extension Center, and the Agricultural Cooperative Society, who provide agricultural extension services to date palm farmers in the Good Valley Governorate, and this sample represents (84.5%) of the total number of extension workers. The agricultural population in the governorate is (60) individuals, according to the Krejcie and Morgan equation to determine the sample size in terms of comprehensive (Krejcie & Morgan: 1970, pp. 607-610).

**C- Time range:** The data was collected during the month of March 2021.

##### **Data collection tools:**

The data was collected during the personal interview using a questionnaire form prepared for this purpose. The form included three parts as follows:

**- The first part is related to the personal and professional characteristics of the respondents in the research area and it was measured as follows:**

**Age:** It is measured by their age to the nearest Gregorian year.

**Upbringing:** The respondents were asked about their upbringing, whether rural or urban.

**Academic qualification:** It was measured by asking the respondents about the number of years of formal education they had.

**Experience in the field of agricultural extension:** It was measured by asking the respondents about the number of years of their experience.

**- Obtaining training courses in the field of date cultivation:** the respondents were asked about the number of courses they were exposed to.

**- Level of contact with date farmers:** The respondents were asked about seven phrases that express the extent of

their strong contact with the farmers. Three degrees were given to those who always carry out the item, two degrees for those who sometimes do the item, and one score for those who rarely do it.

**The second part contains (77) indicative activities related to (4) sub-items that contribute to the advancement of dates to reach a good product of Egyptian dates as follows:**

**- Activities related to providing farmers with knowledge and productive information:**

It includes first the cultivation process: the date of planting the seedlings in August and September, the method of cultivation, then the irrigation process: It includes (three recommendations) related to the date of irrigation of the cuttings every 3-4 days during the summer and every 20 days during the winter, and irrigation of fruitful palms every 15 days during Flowering, and irrigation should take place in the early morning or evening, then the organic fertilization process: It includes (two recommendations) related to the amount of organic fertilizer added to each palm, which is four harvests, and the date for adding organic fertilizer during the months of November and December, then the stage of serving the head of the palm: It includes five agricultural operations The main ones are (pruning, pollination, curving, slipping, and gagging), and each of them includes several agricultural technical recommendations, namely: The pruning process and includes (eight recommendations) related to pruning once a year during the month of July, and getting rid of excess dry fronds and thorns, Pruning is done when the cuttings are out, and a very sharp machine is used when pruning is done, and the cut is at a height of 10 to 12 cm from the base of the carafe, and the fronds are cut from the bottom to the top of an outward slope, and 8 to 9 green leaves are left for each blade, and the wounds are cleansed after pruning, then the vaccination process and includes (five recommendations) related to that Pollination takes place from late April to late May, and manual pollination is better than mechanical pollination, and pollination takes place two days after the splitting of the female object. It includes (four recommendations) related to curving in the month of July, and curving is done for items with long spurs, long spurs are drawn down and rested on the leaves, and small spurs are drawn on a two-pronged branch based on the palm, and the slipper process includes (four recommendations) related to running slippers. During the month of June and July, the larynx is shortened, or some or all of it is removed. The hamstrings are shortened by removing a quarter of their length, and some of the flaps are removed completely, and the gagging process includes (three recommendations) related to the girdle period, i.e., during the hiatus and before the wet stage, and the neck is covered with bags. The nets are made of paper or burlap, and the nets are tied from the top around the arjoun and left open from the bottom, thus bringing the total number of activities and sub-technical recommendations related to providing farmers with knowledge and productive information (thirty-one recommendations).

**1. Activities related to providing farmers with knowledge and marketing information:**

It includes first the stage of **collecting the fruits:** It includes a number (five recommendations), which are: the

saddlebags are tied with ropes and removed at once, the spurs are shaken to drop the wet fruits, the surface of the soil is covered with covers of matting during collection, the fruits are separated by a part of the saddlebags and the saddlebags are placed in a shaded place, then a stage After collecting the fruits: It includes five main agricultural operations (sorting, grading, packaging, storage, and transportation) and includes a number (eight recommendations): The immature fruits are sorted, damaged and contaminated fruits are excluded, the fruits are packed in pickers and baskets, and the fruits are packed in Plastic containers without a cover, and the fruits are stored in baskets of palm fronds, and it is taken into account that the containers are not filled because the fruits do not come out of their edge, and the collection packages are stacked without pressure on them, and attention is paid to transporting the fruits without causing damage to them, thus the total number of activities and sub-technical recommendations related to Providing farmers with knowledge and marketing information (thirteen recommendations).

**- Activities related to providing farmers with knowledge and information in the field of controlling the most important pests that infect date palms:**

It includes twelve activities: awareness of the damage of the red palm weevil, awareness of the symptoms of red palm weevil infestation, awareness of farmers on how to integrated the red palm weevil, awareness of farmers on how to combat palm fronds or leaf borers, awareness of farmers on how to combat the dust spider, awareness of farmers on how to combat Minor date worm (humira), educating farmers on how to combat the date palm pollen worm or the major date worm or piercing Al-Arajeen, educating farmers on how to combat the oasis date worm, educating farmers on how to combat the Ameri date worm, educating farmers on how to combat pomegranate flour, educating farmers on how to combat Soranium beetle or saw-breasted beetle, raising awareness of farmers on how to combat any other pests that affect date palms.

**2. Activities related to providing farmers with knowledge and information to solve the problems they face during the production and marketing of the date crop:**

It includes eleven activities to solve twenty-one problems, which are: **First, the productivity problems**, which are the lack of water, the lack of ladders for harvesting the fruits of dates, the inexperience of agricultural workers in servicing the head of the palm, the lack of fertilizers, the lack of pesticides, the lack of trained labor, the high price of seedlings Primitive means of crop transportation, high price of fertilizers, high price of pesticides, high wages of workers, disease infestation, insect infestation, weed infection, **secondly, the marketing problems** which are the exploitation of traders, lack of trained labor, high collection costs, high transportation costs, increased crop losses Lack of suitable packages, high package prices.

The total score obtained as a result of summing the degrees of the previous four sub-items expresses the degree of performance of the surveyed agricultural extension agents for the extension activities related to the advancement of the production and circulation of Egyptian dates in the research area after calibration. To promote the production and circulation of Egyptian dates through the following equation:

$$\text{Standard score} = \frac{\text{raw score of the respondent} - \text{arithmetic mean}}{\text{Standard deviation}}$$

**The third part:** is concerned with the most important problems and obstacles facing agricultural extension agents when performing their role and their proposals to solve them.

**Statistical hypothesis:**

There is no statistically significant dependency relationship between the dependent variable represented in the degree of performance of the surveyed agricultural extension agents for extension activities related to the advancement of production and circulation of Egyptian dates and between each of the six studied independent variables: age, upbringing, academic qualification, experience in the field of agricultural extension, and access to courses Training in the field of production and handling of date palms, and the level of contact with date palm growers.

**The results and discussion:**

**First: The current status of dates locally:**

**1- Production indicators of Egyptian dates during the period (2005-2020) :**

The study of Table No. (1) shows that the area planted with palm trees during the study period ranged between a minimum of about 85.2 thousand feddanin 2006, and a maximum of about 119.6 thousand feddanin 2017, and an annual average of about 20304,41 feddan.

Estimates of the general time trend equation for the development of the area planted with palm trees during the study period, as in equation No. (1), in Table No. (2) indicate that it increased at a statistically significant annual rate of about 2518.67 thousand feddans annually, or about 2.49% of the average area The value of the coefficient of determination ( $R^2$ ) indicates that about 81% of the changes occurring in the cultivated area of date palms are due to factors whose effects reflect the time factor.

It was clear from the study of Table No. (1) that the number of fruitful palm trees during the study period ranged between a minimum of about 11,209,593 palm trees in 2005, and a maximum of about 14,998,72 palm trees in 2018, and an annual average of about 125,578,858 palm trees.

Estimates of the general time trend equation for the development of the number of fruitful palm trees per million trees during the study period, as in equation No. (2), in Table No. (2) indicate that it increased at a statistically significant annual rate of about 235.3 thousand palm trees annually, or about 1.8% of the average Annually, and the value of the coefficient of determination ( $R^2$ ) indicates that about 80% of the changes occurring in the number of fruitful palm trees are due to factors whose effects reflect the time factor.

It was also shown from the study of Table No. (1) that the productivity of the palm tree during the study period ranged between a minimum of about 101 kg / palm in 2005, and a maximum of about 115.6 kg / palm in 2020, and an annual average of about 108.8 kg / palm .

Estimates of the general time trend equation for the development of palm tree productivity during the study period, as in equation No. (3), in Table No. (2), indicate that it increased at a statistically significant annual rate of about 0.676 palm tree productivity annually, or equivalent to about 0.61% of the average Annually, and the value of the coefficient of determination ( $R^2$ ) indicates that about 47% of



the changes occurring in palm tree productivity are due to factors whose effects reflect the time factor.

It was also clear from the study of Table No. (1) that the total production of dates during the study period ranged between a minimum of about 1,159,690 tons in 2005, and a maximum of about 1603762 thousand tons in 2019, and an annual average of about 139,4722.8 thousand tons.

Estimates of the general time trend equation for the development of the total production of dates during the study period, as in equation No. (4), in Table No. (2), indicate that it increased at a statistically significant annual rate of about 26817.3 thousand tons annually, or about 1.88% of the average. Annually, and the value of the coefficient of determination ( $R^2$ ) indicates that about 77% of the changes occurring in the total production of dates are due to factors whose effects reflect the time factor.

The estimated values of the average instability coefficient of the productivity indicators for Egyptian dates indicate relative stability during the study period. The productivity of the palm is the most stable, followed by the number of fruitful palm trees, with an average of about 0.66% and 1.9% for each of them, respectively, while the area and total production were stable with an average of about 3.3% and 2.3%, respectively, during the study period.

## 2- Export indicators for Egyptian dates during the period (2005-2020):

The evolution of the export quantity of Egyptian dates: It is evident from the study of Table No. (1) that the quantity of exports of dates during the study period ranged between a minimum of about 4.1 thousand tons in 2005, and a maximum of about 50.78 thousand tons in 2018, with an annual average It amounted to about 16,869.5 thousand tons.

Estimates of the general time trend equation indicate the development of the amount of exports of Egyptian dates in thousand tons during the study period, as we note in 2019 that no quantities were exported due to the conditions of the Corona pandemic (Covid-19) and all export and import operations stopped all over the world, as the equation

indicates No. (5), in Table No. (2), indicates an increase in the exported quantities of Egyptian dates at a statistically significant annual rate of about 1552.23 tons annually, or about 7.76% of the average exported quantities of Egyptian dates annually, and the value of the determination coefficient ( $R^2$ ) indicates About 23% of the changes in the quantity of Egyptian dates exports are due to factors whose effects reflect the time factor.

The results also indicated a decrease in the percentage of exported quantities of dates to the total domestic production, reaching its lowest by about 0.35% in 2005, while it reached its maximum by about 3.25% in 2018, with an average of about 1.37% during the study period, which indicates that the largest proportion of production is consumed locally.

**- The export value of Egyptian dates:** as it was shown from the study of Table No. (1) that the value of exports of Egyptian dates during the study period ranged between a minimum of about 2,464 thousand dollars in 2005, and a maximum of about 5,006 thousand dollars in 2018. And an annual average of about 16,695.7 thousand dollars.

Estimates of the general time trend equation for the development of the value of exports in thousand dollars during the study period, as in equation No. (6), in Table No. (2), indicate an increase at a statistically significant annual rate of about 3138.56 thousand dollars annually, or about 11.5% of the average The value of exports exported annually, and the value of the coefficient of determination ( $R^2$ ) indicates that about 84% of the changes in the value of exports of Egyptian dates are due to factors whose effects reflect the factor of time.

**- The export price of Egyptian dates:** The study of Table No. (1) shows that the export price of Egyptian dates during the study period ranged between a minimum of about 605 dollars / ton in 2005, and a maximum of about 4265 dollars / ton in 2020. And it amounted to about 2545 dollars / ton in 2012, and an annual average of dates about 1127 dollars / ton.

**Table1. productivity indicators and export indicators of Egyptian dates during the period (2005-2020)**

Year	productivity indicators				export indicators			
	Area Feddan	fruitful palm (palm)	Productivity kg/palm	Production (tons)	Export Quantity ton	exports % to production	export value Thousand dollars	export price dollar/ton
2005	86037	112.9039	101	1159690	4076	0.35	2464	605
2006	85156	114.2969	104.5	1328720	5090	0.38	3145	618
2007	86751	118.88023	110	1313696	4704	0.36	3009	640
2008	87651	120.39424	111.8	1326133	8329	0.63	7205	865
2009	87879	121.82034	109.12	1270478	14659	1.15	17535	1196
2010	99829	121.43387	108.9	1352954	20551	1.52	22764	1108
2011	99132	121.77400	104.6	1373570	23792	1.73	28211	1186
2012	91637	122.71701	100.7	1400072	11282	0.81	28716	2545
2013	90257	120.34881	112	1328468	24590	1.85	33402	1358
2014	104808	122.97093	111.6	1465030	37625	2.57	47319	1258
2015	115611	128.27230	108	1684917	25994	1.54	32854	1264
2016	118441	149.06331	114.2	1549260	40497	2.61	41387	1022
2017	119697	137.18173	112.7	1542111	38048	2.47	33346	876
2018	113219	149.98722	113.8	1563687	50776	3.25	50006	985
2019	114314	140.24409	114.3	1603762	-	0.00	-	1059
2020	110743	143.80430	115.6	1069803	9712	0.62	43004	4265
Average	97801.0	12557885.8	108.8	1394722.8	16869.5	1.37	16695.7	1127.1
G.M.C.I*	3.3	1.9	0.66	2.3	18.0		47.63	15.6

\* G.M.C.I: the Geometric Mean of the Coefficient of Instability

$$Y = \frac{|Y - \bar{Y}|}{\bar{Y}} \times 100$$

Source: collected and calculated from:

1- Ministry of Agriculture and Land Reclamation, Economic Affairs Sector, Agricultural Statistics Bulletin, miscellaneous issues.

2- [www.trademap.com](http://www.trademap.com)

Estimates of the general time trend equation for the development of the export price in dollars / ton during the study period, as in equation No. (7), in Table No. (2), indicate an increase at a statistically insignificant annual rate of about 92.8 dollars annually, or about 7.12% From the average annual export price of Egyptian dates, and the value of the coefficient of determination ( $R^2$ ) indicates that about 24% of the changes in the export price of Egyptian dates are due to factors whose effects reflect the time factor.

The results indicate that the estimated values of the average instability coefficient of the export indicators for

Egyptian dates indicate relative instability during the study period, where the value of the stability coefficient, which is zero, indicates the optimal state for the stability of commodity exports, and whenever the value of the coefficient is greater than zero (regardless of the reference), this means Instability in exports, which amounted to about 15.6% for export prices, and rose to about 18.5% for the exported quantities of Egyptian dates, and the value of the average instability coefficient reached its maximum in the value of exports of Egyptian dates, which amounted to about 47.6%.

**Table2. Equations of the general time trend of production and export indicators for Egyptian dates during the period (2005-2020).**

statment Number	Dependent variable $Y^h$	model	Annual rate % of change	Annual average	$R^2$	F
(1)	palmarea	$\hat{Y} = 79601.4 + 20304.41 X_t$ ( $70.7$ ) ** ( $7.73$ ) **	7.49	97801.0	0.81	**09.79
(2)	Number of fruitfulpalms	$\hat{Y} = 10839742 + 235340.7 X_t$ ( $37.7$ ) ** ( $7.71$ ) **	1.8	12557885.8	0.80	**08.44
(3)	Productivity	$\hat{Y} = 103.81 + 0.676 X_t$ ( $0.7$ ) ** ( $3.09$ ) **	0.61	108.8	0.47	**12.04
(4)	Production	$\hat{Y} = 1199078 + 26817.3 X_t$ **( $37.0$ ) ( $7.02$ ) **	1.9	13945722.8	0.77	**49.34
(5)	Quantity of Egyptian exports of dates by ton	$\hat{Y} = 6788.8 + 1552.3 X_t$ ( $0.93$ )( $2.16$ ) *	7.76	16869.0	0.23	*4.22
(6)	Value of Egyptian exports of dates in a thousand dollars	$\hat{Y} = 559.1 + 3138.56 X_t$ ( $0.16$ ) ( $8.73$ ) **	11.0	16690.7	0.84	**74.0
(7)	Egyptian export price For dates in dollars/ton	$\hat{Y} = 514.1 + 92.82 X_t$ ( $1.19$ ) ( $7.08$ ) *	7.12	1127.1	0.24	*4.33

$\hat{Y}$ : the estimated value of the dependent variable referred to in year t.  $X_t$ : The time component in years,  $t = 1, 2, 3, \dots, 16$ .

The values in parentheses express the calculated (t) values. \* Significant at (0.01). \*\* Significant at (0.05).Source: Calculated from Table No. (1).

## second: The production and export situation of dates globally during the period (2005-2020):

By reviewing the data in Table (3), it shown that the average global production of dates during the study period amounted to about 7,731.67 thousand tons, it ranged between a minimum of about 6551.4 thousand tons in 2005, and a maximum of about 9279.5 thousand tons in 2020, and the trend equation estimates indicate The general timeline for the development of global production of dates during the study period, as in equation No. (1), in Table No. (4), to its increase at a statistically significant annual rate, amounting to about 170.14 thousand tons annually, or about 2.2% of the average global production of dates annually. The value of the coefficient of determination ( $R^2$ ) indicates that about 92% of the changes occurring in the global production of dates are due to factors whose effects reflect the time factor.

### 1- Quantity of global imports of dates during the study period (2005-2020):

Table No. (3) shows that the amount of global imports of dates during the study period ranged between a minimum of about 612.27 thousand tons in 2010, and a maximum of about 1402.08 thousand tons in 2018, and an annual average of about 970,32 thousand tons. Estimates of the general time trend equation for the development of the quantity of global imports in thousand tons during the study period, as in equation No. (2), in Table No. (4) indicate an increase in the imported quantities of world dates at a statistically significant annual rate of about 48.25 thousand tons annually, or representing About 2.34% of the average quantities of imported global dates annually, and the value of the coefficient of determination ( $R^2$ ) indicates that about 70% of the changes in the amount of global imports of dates are due to factors whose effects reflect the time factor.

**Table3. The development of the world production, imports and exports of dates during the period (2005-2020)**

Years	global productionquantity	global exports		global imports		global exportprice
	(Quantity (thousand tons	Value of \$ million	Quantity (thousand tons	Value of \$ million	Quantity (thousand tons	dollar/ton
2005	6551.42	437.441	6551.42	425.675	789.486	605
2006	6770.193	434.9	6770.193	492.652	700.255	618
2007	6962.971	621.963	6962.971	593.529	869.849	640
2008	7018.489	691.217	7018.489	663.063	852.027	865
2009	7184.082	606.463	7184.082	634.638	675.599	1196
2010	7527.766	775.964	7527.766	733.721	612.273	1108
2011	7265.035	902.189	7265.035	834.384	722.31	1186
2012	7432.484	875.561	7432.484	787.449	689.734	2545
2013	7522.861	993.102	7522.861	946.399	799.678	1358
2014	7428.939	1438.819	7428.939	1255.094	1202.588	1258
2015	8094.353	1268.997	8094.353	1231.018	1153.681	1264
2016	8320.428	1451.999	8320.428	1320.755	1209.093	1022

٢٠١٧	8401.274	1659.805	8401.274	1568.766	1263.843	876
٢٠١٨	8871.351	1701.849	8871.351	1762.121	1402.086	985
٢٠١٩	9075.446	2001.634	9075.446	1945.854	1266.781	1059
* ٢٠٢٠	9279.541	١٨٩٧.٩٠٦	9279.541	١٦٩٣.٢٩٢	١٣١٥.٨٤٩	١٣٨٩
Average	7731.66	970.32	1055.53	1060.88	1109.99	١٣٥٦.٦٢

Source: 1-<http://faostat.fao.org>. 2- [www.trademap.com](http://www.trademap.com)

**2-Evolution of the value of global imports of dates during the study period (2005-2020):** as it was shown from the study of Table No. (3) that the value of imports of Egyptian dates during the study period ranged between a minimum of about 425.68 thousand dollars in 2005, and a maximum of about 1945.85 thousand dollars in 2019, And an annual average of about 1055,53 thousand dollars.

Estimates of the general time trend equation for the development of the value of global imports in thousand dollars during the study period, as in equation No. (3), in Table No. (4), indicate that it increased at a statistically significant annual rate of about 99.44 thousand dollars annually, or the equivalent of about 9.42% of The average value of imports annually, and the value of the coefficient of determination ( $R^2$ ) indicates that about 93% of the changes in the import value of global dates are due to factors whose effects reflect the factor of time.

### 3- The amount of global exports of dates during the study period (2005-2020):

Table No. (3) shows that the amount of global exports of dates during the study period ranged between a minimum of about 469.2 thousand tons in 2006, and a maximum of about 1836.8 thousand tons in 2019, and an annual average of about 1060.88 thousand tons.

Estimates of the general time trend equation for the development of the amount of world exports in thousand tons during the study period, as in equation No. (4), in Table No. (4) indicate an increase in the exported quantities of world dates at a statistically significant annual rate of about 70.32 thousand tons annually, or representing About 6.63% of the average quantities of exported global dates annually, and the value of the coefficient of determination ( $R^2$ ) indicates that about 70% of the changes in the amount of

global exports of dates are due to factors whose effects reflect the time factor.

**4- Evolution of the value of global exports of dates during the study period (2005-2020) :** as it was shown from the Study of Table No. (3) that the value of exports of Egyptian dates during the study period ranged between a minimum of about 434.9 thousand dollars in 2006, and a maximum of about 2001.6 thousand dollars in 2019. And an annual average of about 1109.99 thousand dollars.

Estimates of the general time trend equation for the development of the value of world exports in thousand dollars during the study period, as in equation No. (5), in Table No. (4), indicate an increase at a statistically significant annual rate of about 107.33 thousand dollars annually, Or the equivalent of about 9.67% of the average value of exports exported annually, and the value of the coefficient of determination ( $R^2$ ) indicates that about 95% of the changes in the value of exports of global dates are due to factors whose effects reflect the factor of time.

**5- Evolution of the global export price of dates during the study period (2005-2020):** The study of Table No. (3) shows that the global export price of dates during the study period ranged between a minimum of about 605 dollars / ton in 2005, and a maximum of about 2545 dollars / ton in 2012, and reached About 1389 dollars /ton in 2020, with an annual average of about 1356.62 dollars /ton.

Estimates of the general time trend equation for the development of the export price in dollars / ton during the study period, as in equation No. (6), in Table No. (4), indicate an increase at a statistically insignificant annual rate of about 29.38 dollars annually, or about 2.6% of the Average annual export price of dates.

**Table4. Equations of the general time trend of production and export indicators for dates globally during the period (2005-2020).**

statment Number	Dependent variable $\hat{Y}$	model	Annual rate of % change	Annual average	$R^2$	F
(1)	global production	$\hat{Y} = 6285.45 + 170.14X_t$ (0.7) ** (13.74) **	2.7	1731.7	0.92	**170.43
(2)	Quantity of global imports of dates per thousand tons	$\hat{Y} = 560.15 + 48.25X_t$ (7.79) ** (0.70) **	2.34	203.9	0.70	**31.90
(3)	The value of global imports of dates in a thousand dollars	$\hat{Y} = 210.25 + 99.44X_t$ (3.09) (14.10) **	9.42	1000.02	0.93	**200.17
(4)	Quantity of world exports of dates per thousand tons	$\hat{Y} = 463.16 + 70.32X_t$ (3.92) (0.70) **	7.73	1060.88	0.70	**33.09
(5)	value of world exports of dates in a thousand dollars	$\hat{Y} = 197.71 + 107.33X_t$ (3.14) (17.02) **	9.67	1109.99	0.95	**272.92
(6)	global export price For dates in dollars/ton	$\hat{Y} = 873.65 + 29.38X_t$ (3.71) (1.12) -	2.6	1356.62	0.00	-1.40

$\hat{Y}$ : the estimated value of the dependent variable referred to in year t.  $X_t$ : The time component in years, t= 1, 2, 3, ....., 16.

The values in parentheses express the calculated (t) values. \* Significant at (0.01). \*\* Significant at (0.05).Source: Calculated from Table No. (3).

### Third: The relative importance of the most important producing, exporting and importing countries of dates in the world:

By reviewing the data of Table No. (5) for the most important countries producing dates globally, it became clear that Egypt ranks first in the world in the production of dates with about 1,588,747 tons as an average for the period (2015-2019), which is equivalent to 18.6% of the total average global production for the same period, which amounted to about 8552,570 tons , followed by Saudi Arabia and Iran in the global production of dates with an average of 1276599, 1216952 tons as an average for the period (2015-

2019), which is equivalent to 14.93%, 14.23% of the total average global production for the same period.

The data of Table No. (5) of the most important countries importing dates globally showed that India ranks first in the world in importing dates with about 346,917 thousand tons as an average for the period (2015-2019), which is equivalent to 27.55% of the total average quantities imported globally for the same period, which amount to about 1259097 tons, followed by the United Arab Emirates and then Morocco in the global imports of dates with an average of 180670.4, 81042.4 thousand tons as an average



for the period (2015-2019), equivalent to 14.35%, 6.44% of the total average global imports for the same period.

It became clear from the data of Table No. (5) of the most important countries exporting dates globally that Iraq ranks first in the world in exporting dates with about 370,579.6 thousand tons on average for the period (2015-2019), which is equivalent to 24.84% of the total average

quantities exported globally for the same period, which amounted to about 149,2139 thousand tons, followed by the United Arab Emirates and then Iran in the global exports of dates with an average of 243469, 162473.6 thousand tons as an average for the period (2015-2019), equivalent to 16.32%, 10.89% of the total average world exports for the same period.

**Table5. The relative importance of global production, exports and imports of dates during the period(2015-2020)**

The most important countries producing Dates			The most important countries importing Dates			The most important countries exporting Dates		
countries	Quantity in tons	%	countries	Quantity in tons	%	countries	Quantity in tons	%
Egypt	1588747	18.58	India	346917	27.55	India	1253.8	0.08
Iran	1216952	14.23	Indonesia	30024.8	2.38	Indonesia	4.2	0.00
Iraq	624371	7.30	Iraq	14805.8	1.18	Iraq	370579.6	24.84
Pakistan	455483.4	5.33	Kazakhstan	25537.2	2.03	Kazakhstan	4110.2	0.28
Saudi Arabia	1276599	14.93	Morocco	81042.4	6.44	Morocco	531.4	0.04
Oman	360463.8	4.21	Pakistan	7377.2	0.59	Pakistan	140252.6	9.40
Tunisia	263540	3.08	Saudi Arabia	721.2	0.06	Saudi Arabia	148552.6	9.96
United ArabEmirates	215911	2.52	Oman	14588.8	1.16	Afghanistan	43.4	0.00
China	167435.8	1.96	Tunisia	533.4	0.04	Oman	12494.8	0.84
Algeria	1061851	12.42	United ArabEmirates	180670.4	14.35	Tunisia	111823.8	7.49
Sudan	415046.8	4.85	United States of America	35148.8	2.79	United ArabEmirates	243469	16.32
			Algeria	115.2	0.01	United States of America	10133.4	0.68
			Iran	674.6	0.05	Algeria	43164.4	2.89
			Egypt	4702.2	0.4	Iran	162473.6	10.89
			France	37793.4	3.0	Egypt	21500	1.44
						France	13444.4	0.90
sum	7646401	-	sum	780652.4	-	sum	1283831	-
Rest of the world	906169.2	10.60	Rest of the world	478444.6	38.00	Rest of the world	208307.8	13.96
World	8552570	100.00	World	1259097	100.00	World	1492139	100.00

Source: collected and calculated from the website data from the Organization of Food and Agriculture - United Nations (FAO).

#### Fourth: Indicators of the competitiveness of Egyptian exports of dates:

##### 1-Relative Comparative Advantage Indicator

The measure of apparent comparative advantage (RCA) indicates potential opportunities to expand trade, and gives an approximate picture of the future exports of the countries under study, by comparing the country's share of global exports of a particular commodity or crop with the share of total or agricultural exports of those countries with the total total exports or When the value of this indicator is higher than the correct one, this indicates that the country enjoys a relative advantage of that commodity or crop. The place of study (3).

Crop apparent comparative advantage (RCA) can be calculated as:

$$RCA_{ji} = (X_{ji}/x_{Ja}) / (x_{wi}/x_{wa})$$

whereas:

$X_{ji}$ : value of a country's exports of commodity i

$x_{Ja}$ : the total value of agricultural exports of the country J

$x_{wi}$ : the total value of the world's exports of the commodity i

$x_{wa}$ : Total value of world agricultural exports

It is clear from Table No. (6) that the apparent comparative advantage index has increased in value from the correct one in the average period (2015-2020) estimated by about 5.55%, which means that the Egyptian date exports enjoy a comparative advantage in the global markets, which indicates the existence of the ability to export and that there

are factors Internal trade in Egypt that helps export may be due to agricultural experience or cheap labor wages, which calls for studying the matter and delving into it in depth to benefit from this commodity.

##### 2- The export efficiency of Egyptian dates:

The export efficiency coefficient is a criterion for comparing the prices of export commodities in the foreign markets and the local markets, as the high export efficiency encourages Egyptian exporters to export the commodity to the foreign market to achieve higher profitability than the local market as a result of the export price being higher than the selling price in the local market and vice versa. It is calculated according to the following model:

export efficiency

$$= \frac{\text{The value of the commodity at export prices (FOB)}}{\text{The value of the commodity at wholesale price}} \times 100$$

The value of the exported commodity is converted to its equivalent in the local currency according to the official exchange rate and its ratio to its value at local wholesale prices. If the ratio is greater than 100%, this means that the commodity is sold in international markets at prices higher than its local prices, and thus the export makes profits and vice versa. That is, the high export efficiency will be a strong incentive for exporters to export the commodity to foreign markets to achieve higher profits than the local markets.

**Table6. Relativecomparative advantage indicator of Egypt's exports of dates during the period (2015-2020) (Value in millions of dollars)**

YEARS	$x_{Ja}$ The total value of Egyptian agricultural exports	$x_{wi}$ The value of world date exports	$X_{ji}$ The value of Egypt's exports of dates	$x_{wa}$ The value of world agricultural exports	$RCA_{ji}$ Relative Comparative Advantage
Average (2015-2020)period	4823.839	1616.8568	31.5186	1374486.821	0.00

Source: collected and calculated from the Internetdatahttp://www.trademap.org

Table No. (7) showed that the export efficiency of Egyptian dates during the period (2015-2020) exceeded 100%. As the annual average of the export efficiency amounted to about 384.3%, which indicates the existence of an export efficiency for Egyptian dates, as the data indicated that the export price of Egyptian dates is higher than the local price by about 384.3% of the local price, and the minimum export efficiency was about 199.8% in 2016. This means that the export price of a ton of Egyptian dates is higher than its counterpart in the local market by a large percentage, which means that there is a great opportunity for the exporter to make profits, and it is better for him to direct the quantity to the foreign market to take advantage of the price difference where the export price is greater than the local price, while the limit reached The maximum export efficiency of the Egyptian dates crop is about 960.2% in 2020, which indicates that the export price of Egyptian dates abroad is more than the price in the local market by about 960.2%. This means that it is better to direct the largest amount of Egyptian dates production for export to take advantage of the price difference abroad from the local price during the year, in addition to the currency difference.

**Table 7. The export efficiency of Egypt's exports of dates during the period (2015-2020)**

year	Exchange Rate	The wholesale price EGP/ton	Export price dollars/ton	Export price (pounds)	Export efficiency %
2015	7.65	4697	1264	9669.6	205.9
2016	10.2	5217	1022	10424.4	199.8
2017	17.81	5833	876	15601.56	267.5
2018	17	5249	985	16745	319.0
2019	16.32	7580	1059	17282.88	228.0
2020	15.67	6960	4265	66832.55	960.2
Average	14.11	5922.67	1578.50	22759.33	384.3

Source: Data collected and calculated from:- The Internet <http://www.trademap.org>

- Central Agency for Public Mobilization and Statistics, "Annual Bulletin of Food Prices and Products - Miscellaneous Issues"

### 3-Market share index:

The market share is one of the indicators for measuring competitiveness and estimating the possibility of developing the competitive conditions of a country's exports

within foreign markets, as its rise reflects the high competitive position of the country in foreign markets for the commodity.

The market share (Al-Laqqa, 2009), is calculated according to the following formula:

$$\text{Market share} = \frac{\text{The quantity of a country's exports to a particular market of a particular commodity}}{\text{The total quantity of imports for this market of that commodity}} \times 100$$

It is clear from the data of Table No. (7) that Egypt's share in the Indonesian market amounted to about 40.63%, while it amounted to about 0.02% in the Moroccan market, and about 12.22% in the Malaysian market during the average period (2015-2020). These percentages indicate an increase in demand for the product The Egyptian market and the possibility of developing the competitive position of Egyptian dates, especially in the Malaysian market and the Indonesian market, given that they are non-producing countries.

**4-Market Penetration Coefficient:** The market penetration rate is one of the most widespread criteria for measuring competitiveness for any country in exporting goods, because it represents a measure of the extent to which the exported commodity is accepted and absorbed in foreign markets, and it also shows the extent to which exports of that commodity in those markets can increase, and thus contributes to Setting the policies for the external marketing of the commodity, and the extent of its ability to absorb additional quantities of the commodity. The market penetration coefficient (Fawaz and Suleiman, 2016) is calculated according to the following equation:

$$\text{Market penetration factor} = \frac{\text{The quantity of a country's imports of a commodity from a particular market}}{(\text{total imports} + \text{production}) - \text{exports of the same commodity}} \times 100$$

It is clear from the table (8) that the market penetration rate of Egyptian date exports during the period (2015-2020) is represented in the Moroccan, Indonesian and Malaysian market. The penetration rate ranged between a maximum of about 40.63% for the Indonesian market, and a minimum of about 8.31% for the Moroccan market.

**Table 8. Estimated competitiveness indicators of Egyptian dates exports in the most important markets for the period (2015-2020)**

Country	Statement	2015	2016	2017	2018	2019	2020	Total	Average
Morocco	The total Quantity of Morocco 's imports from the world	79.0	79.32	79.07	97.44	98.87	77.17	81.30	80.23
	Morocco 's imports of Egyptian dates	14.08	21.78	12.20	20.74	14.28	11.77	94.79	10.78
	Morocco 's production of dates	100.38	120.33	129.07	111.7	101.03	91.37	709.87	109.98
	Morocco 's exports of dates to the world	0.771	0.427	0.178	0.222	1.004	3.094	7.237	1.04
	%market share	20.27	31.42	17.49	21.18	14.44	10.31	120.99	20.02
Malaysia	market penetration rate%	8.33	11.21	7.14	9.88	7.17	7.11	89.8374	8.31
	The total Quantity of Malaysia 's imports from the world	18.87	18.27	27.20	19.17	18.07	22.42	123.03	20.01
	Malaysia 's imports of Egyptian dates	2.3	2.79	2.72	2.40	2.19	2.08	14.83	2.47
	Malaysia 's production of dates	-	-	-	-	-	-	-	-
	Malaysia 's exports of dates to the world	2.73	3.37	3.0	2.91	2.70	4.13	19.38	3.23
Indonesia	%market share	12.19	14.72	9.98	12.79	12.13	11.01	73.3141	12.22
	market penetration rate%	14.20	18.04	11.02	10.08	14.30	14.11	87.2907	14.00
	The total Quantity of Indonesia's imports from the world	21.0	23.23	34.72	39.91	37.17	02.40	207.43	34.07
	Indonesia's imports of Egyptian dates	7.10	8.00	14	19.09	17.07	21.7	87.40	14.41
	Indonesia's production of dates	-	-	-	-	-	-	-	-
	Indonesia's exports of dates to the world	0.007	-	0.002	0.001	0.009	0.087	0.107	0.02
	%market share	33.97	34.70	40.44	49.09	44.40	41.18	243.728	40.72
	market penetration rate%	33.98	34.77	40.40	49.09	44.41	41.19	243.781	40.73

Source : [www.trademap.com](http://www.trademap.com)

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These results indicate that Egypt has a competitive advantage in these markets, which means the possibility of developing exports of Egyptian dates to these markets, especially the Malaysian market and the Indonesian market, because they are non-producing countries for dates and therefore must be preserved. For dates in addition to its multiple import sources.

## 5-Relative Price Index:

It is the ratio between the average export price of the commodity for any competing country to the average export price of the Egyptian commodity, and it is calculated as follows:

$$Pa_j = \frac{P_c}{P_e}$$

Whereas:

$pa_j$  = the ratio between the average export price of the commodity of a competing country to its Egyptian counterpart.

$P_c$  = The average export price of the commodity for a competing country.  
= The average Egyptian commodity export price.

A higher value of the indicator than a correct one means an increase in Egypt's competitiveness in foreign markets, and a lower value of the indicator than a correct one means a decrease in Egypt's competitiveness in foreign markets.

The study of the relative price index of the most important date-exporting countries that compete with Egypt in the export of dates shows that the Egyptian price is lower than its Tunisian counterpart by 21%, 56%, 49% in the Moroccan, Indonesian and Malaysian markets, respectively Table (9) and the higher Tunisian price may be due to the Egyptian As a result of the variance and different varieties.

**Table9. The relative price index of Egyptian dates in the most important export markets for the average period (2015-2020)**

market	Morocco	Indonesia	Malaysia
countries	Tunisia - Egypt	Tunisia - Egypt	Tunisia - Egypt
Tunisian price (dollars / ton)	2.05	3.47	3.10
Egyptian price (dollars / ton)	1.622	1.041	1.098
%Egyptian price: Tunisian price	79%	30%	35%
Relative price	1.27	2.20	1.94
countries	Saudi Arabia - Egypt	Saudi Arabia - Egypt	Saudi Arabia - Egypt
Saudi price (dollars / ton)	2.110	1.1628	2.9488
%Egyptian price: Saudi price	77%	33%	76%
Relative price	1.30	0.70	2.47
countries	Emirates - Egypt	Emirates - Egypt	Emirates - Egypt
Emirati price (dollars / ton)	1.920	1.960	1.867
%Egyptian price: Emirati price	16%	22%	14%
Relative price	1.28	1.28	1.17

Source: Collected and calculated from the data: UN COMTRADE statistics-[www.trademap.com](http://www.trademap.com)-<http://faostat.fao.org>

## Fifth: The competitive position of Egyptian dates in the Moroccan-Indonesian and Malaysian market:

Likewise, when comparing the Egyptian price with the Saudi price, it became clear that the Saudi price was higher than the Egyptian price in the Moroccan and Malaysian market by 23% and 60%, respectively, while the Saudi price was low in the Indonesian market by 33%, and for the Emirati price it rose by 16%, compared to the Egyptian price. 22%, 14% in the three mentioned markets, respectively.

**The Moroccan market:** Table (10) shows that Tunisia is one of the most important countries exporting dates to the Moroccan market, as its average exports to Morocco are about 28.9 thousand tons, which represents about 36% of the average Moroccan total imports of dates from the world, amounting to about 80.22 thousand tons during the study period. Then followed by the UAE(Emirates), as its average exports of dates to Morocco amounted to about 25.4 thousand tons, which represents about 31.7% of the average total Moroccan imports of dates from the world, and then Egypt came in third place, where its average exports to Morocco amounted to about 15.8 thousand tons, which represents about 19.7% of the average total Moroccan

imports of dates from the world, then Algeria and Saudi Arabia come in the fourth and fifth place in the order after that and they represent about 6.4% and 3.5% of the average total Moroccan imports of dates from the world, respectively.

By examining the export prices of competing countries within the Moroccan market for dates, it was found that Egypt enjoys a competitive price advantage within the Moroccan market, as the average export price of Egyptian dates amounted to about 1621 dollars per ton, compared to 2170, 1857, 2108, 2246 dollars / ton for Tunisia, UAE, Saudi Arabia and Algeria, respectively. .

By studying the price ratio index of the most important countries competing for the date-exporting bankers to the Moroccan market, the price advantage of Egyptian dates became clear in all markets, as the Egyptian price decreased from its Tunisian, Emirati, Algerian and Saudi counterpart by 25%, 13%, 18% and 23%, respectively.

**The Indonesian market:** It is evident from the table (10) that Egypt is one of the most important countries exporting dates to the Indonesian market, as its average exports to Indonesia are about 14.41 thousand tons, which represents

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about 41.7% of the average total Indonesia's imports of dates from the world, amounting to about 34.6 thousand tons during the study period. Then followed by the UAE, as its average exports of dates to Indonesia amounted to about 8.1 thousand tons, which represents about 23.3% of the average total imports of Indonesia from dates from the world, and then followed by Saudi Arabia in the third place, with an average export of 5.02 thousand tons to Indonesia, which represents about 14.5 % of the average total Indonesia's imports of dates from the world, then Iran and Tunisia come fourth and fifth in the ranking after that and they represent about 10.3%, 6.4% of the average of Indonesia's total imports of dates from the world, respectively.

By examining the export prices of competing countries within the Indonesian market for dates, it was found that Egypt enjoys a competitive price advantage within the Indonesian market, where the average export price of Egyptian dates amounted to about 1540 dollars per ton, compared to 3392, 2042, dollars / ton for Tunisia and Saudi Arabia, respectively.

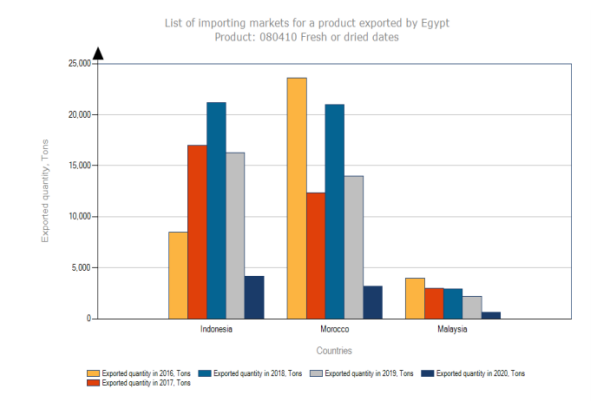
While the UAE and Iran enjoyed a competitive price advantage compared to the Egyptian price, where the average export price per ton was about 1179, 1175 dollars per ton, which indicates the need to study the varieties of dates of high quality in order to increase the market share in the Indonesian market.

The average of Malaysia's total imports of dates from the world, then Saudi Arabia, Egypt and the UAE come in the fourth, fifth and sixth place in the ranking after that, and they represent about 12%, 9.7%, 8.9% of the average total Malaysian imports of dates from the world, respectively. By studying the export prices of competing countries within the Malaysian market for dates, it was found that Egypt has a competitive price advantage in the Malaysian market, as the average export price of Egyptian dates amounted to about 1598 dollars per ton, compared to 3087, 1922, 3711, 2405, 2048 dollars / ton for Tunisia, UAE, Saudi Arabia, Iran and China Respectively .

**Table10. The average market share and export prices of the most important competing countries in the Moroccan, Indonesian and Malaysian market during the period (2015-2020)**

MARKETS	Exporters	Imported quantity y thousand tons	% marketshare	the value Thousand dollars	average export price dollars / ton	of the Egyptian % price to the price of each country
Morocco	Tunisia	٢٨.٩	36.02	62.255	2169.7	25
	United Arab Emirates	٢٥.٤	31.66	34.351	1857	13
	Algeria	٥.١	6.36	11.234	2245.8	28
	Egypt	١٥.٨	19.69	17.336	١١٢١	0
	Saudi Arabia	٢.٨	3.49	7.433	2108	23
	Total	78	97.2	132.609	10002	
	global average	٨٠.٢٢	100.0	١٣٦.٨	1696	
Indonesia	Other countries	2.22	2.77	4.19	-	
	Egypt	14.409	41.68	15.421	١٥٤٠	
	Tunisia	2.195	6.35	17.237	3392	54.6
	United Arab Emirates	8.066	23.33	9.536	1179	(٢٠.٦)
	Saudi Arabia	5.025	14.54	2.546	2042	٢٤.٦
	Iran	3.576	10.34	3.731	1175	(٢١.١)
	Total	33.271	96.24	48.471	9328	
Malaysia	global average	34.571	100.00	53.951	1542	
	Other countries	1.3	3.8	5.48	-	
	Tunisia	5560	27.13	17200	3087	48.2
	Iran	3514	17.15	8780	2405	٣٣.٦
	China	3697	18.04	7210	2048	٢٢.٠
	Saudi Arabia	2471	12.06	4337	3711	٥٦.٩
	United Arab Emirates	1821	8.89	3806	1922	١٦.٩
	Egypt	1983	9.68	2661	١٥٩٨	٠.٠
	Total	19046	92.93	43994	14771	
	global average	20495	100	49427	2429	
	Other countries	1449	7.07	5433.00		

Source: Collected and calculated from the data: UN COMTRADE statistics-www.trademap.com



Sources: ITC calculations based on UN COMTRADE statistics  
**Figure 1. Imported quantities of Egyptian dates in the most important global markets during the period**

(2016-2020)

By studying the price ratio index of the most important countries competing with the date-exporting bankers for the Indonesian market, the price advantage of Egyptian dates became clear in some markets, as the Egyptian price fell from its Tunisian and Saudi counterparts by 54.4% and 24.6%, respectively. While the export price of Emirati and Iranian dates decreased from the Egyptian price by 30.6% and 31.1%, respectively.

**The Malaysian market:** Table (10) shows that Tunisia is one of the most important countries exporting dates to the Malaysian market, as its average exports to Malaysia are about 5.6 thousand tons, which represents about 27.1% of the average total Malaysian imports of dates from the world, amounting to about 20.5 thousand tons during the study

period. Then followed by the State of China, where the average exports of dates Malaysia has about 3.7 thousand tons, which represents about 18% of the average total Malaysian imports of dates from the world, followed by Iran in the third place, as its average exports to Malaysia are about 3.5 thousand tons, which represents about 17% of the world's imports.

By studying the price ratio index of the most important countries competing for date export bankers to the Malaysian market, the price advantage of Egyptian dates became clear in all markets, as the Egyptian price fell from its Tunisian, Iranian, Chinese, Saudi and Emirati counterpart by 48.2%, 33.6%, 22%, 57%, and 17%, respectively.

From the foregoing, and by studying the competitiveness of Egyptian dates in international markets, it became clear that Egypt enjoyed a competitive advantage in these markets, which means the possibility of developing exports of Egyptian dates to these markets, especially the Malaysian market and the Indonesian market, especially since most of them are non-producing countries for dates and therefore must be preserved.

## Sixth: Production of Dates in the New Valley Governorate (case study) :

The date palm is considered one of the most important strategic crops in the New Valley Governorate, as it is one of the largest governorates of the Republic in the cultivation of date palms in terms of the area and numbers of date palms in general, according to the statistics of 2019/2020, and the areas of the date palm amount to about 25,936 acres, representing 15.6% of the total The cultivated area at the level of the Republic, and the number of palm trees is about 2.363 million palm trees, representing about 11.0% of the total number of palm trees at the level of the Republic in the same year (Directorate of Agriculture in the New Valley 2019/2020),

In the New Valley Governorate, varieties of semi-dry date palms, especially Siwa, Saidi, Al-Mentour and date palms, dominate. Table (11) shows that the Kharga center is the highest center in the New Valley, with an area planted with palms, which represents 46.62% of the total cultivated area in the governorate, which amounts to about 25,936 acres. The total number of palm trees in the governorate is about 2363731 palm trees.

**Table11.Statement of numbers of palm and palm trees cultivated area centers of the New Valley in 2020**

Administration	palmnumber			Number of fruitfulpalms		Number of palms for each Variety				
	Number	acre area	%	Number	acre area	Saidi	Mentor	dates	Others	TotalVarieties
Kharga	12.7212	12.92	47.62	93.483	93.0	1.04918	8.27	41742	3.0	117992.
Paris	141921	1174	7.84	90470	1193	112.23	2474	279	.	137932
Balat	02149	022	2.01	32372	324	24072	23387	0.0	.	48404
Moot	021649	0247	2.23	44430	4478	2980.0	14.130	71740	21.0	0.2480
AL-Qaser	101029	1071	7.2	110778	1183	11.297	22980	779.	090.	147.22
Farafra	219371	3376	12.87	71304	1.41	779.1	23339	721	1230.	210371
Oweinat	7991.	14.0	0.42	7768.	1302	43.0	.	.	7038.	7978.
TotalGovernorate	2363731	20936	100	1707872	18876	16720.7	314747	111772	19993.	2298804

Source: Directorate of Agriculture - New Valley 2020

By reviewing the data of Table No. (12), it was found that the Kharga center was the highest center in terms of the number of fruitful females, the area planted with fruitful palms. The center represents about 52.9% of the total number of fruitful females in the New Valley Governorate, which amounted to about 175,7872 palm trees, and the center also represents about 49.3% of the total number of fruitful females. The farm in the governorate is about 18,876 acres, and the Kharga center also represents about 49.62% of

the total production in the governorate, with an average production per acre of about 8,056 kg / feddan, with an average production per palm of about 80.6 kg / palm, while the average production of a single palm reached a maximum in the Oweinat Center with an average production of about 143.6 kg This is due to the small area planted with fruitful palms, which represents about 7.2% of the total governorate, and the increased interest of the farmer in increasing the productivity of a single palm.

**Table12. The average production of date palms in the centers of the New Valley Governorate in 2020**

Administration	Number of femalefruitful	%	Fruitfulpalm area	%	Average production per acre (kg)	Average palmproduction (kg)	total production (tons)	%
Kharga	93.483	52.93	93.0	49.3.	8.06	80.7	74974	49.72
Paris	90470	0.43	1193	7.32	707.	82	7820	0.18
Balat	32372	1.84	324	1.72	80.0	80	2703	1.82
Moot	44430	20.30	4478	23.72	8779	87.4	38874	20.73
AL-Qaser	110778	7.09	1183	7.27	8709	88.0	10243	7.78
Farafra	71304	4.07	1.41	0.01	474.	94	770.4	4.44
Oweinat	7768.	3.80	1302	7.17	7187	143.7	9717	7.43
TotalGovernorate	1707872	100.00	18876	100.00	8.04	87	101.72	100.00

Source: Directorate of Agriculture - New Valley 2020

## Seventh: Analysis of the performance of existing agricultural extension in supporting farmers and providing them with knowledge production, marketing and export for the development of the competitive position of the Egyptian Dates in international markets:

### A- The personal and professional characteristics of the respondents in the agricultural extension work in the research area:

The results presented in Table No. (13) showed that the respondents of agricultural extension work in the New Valley area are distributed according to their studied personal and professional characteristics as follows: -

**1- Age:** The results showed that (21.7%) of the respondents fall in the age group (less than 36 years), while (41.7%) of the respondents fall in the age group (36 to less than 47 years), and (36.7%) are in the age group. The respondents are in the age group (47 years and over), and these results



indicate that 63.3% of the respondents fall into the categories of young and middle age, and therefore it is expected that they will be more receptive to new ideas for the advancement of Egyptian date products.

**2- Origin:** The results showed that (33.3%) of the respondents are of urban origin, and that (66.7%) of them are of rural origin, which makes them more receptive and willing to pay attention to date palm cultivation in the research area.

**3- Academic qualification:** the results showed that (48.3%) of the respondents have a high qualification, and that (51.7%) of them have an average qualification, which requires working to exert more effort to assimilate them to the modern technical methods and recommendations for minimizing the wastage of the date crop in his area. search.

**4- Experience in the field of agricultural extension:** It was clear from the results that (20.7%) of the respondents had experience in the field of agricultural extension less than 12 years, and that (42.6%) of them fall into the category of experience from (12 to less than 22 years), and that (36.7%) of the respondents have experience in the field of agricultural extension 22 years or more, and these results indicate that (79.3%) of the respondents have medium and high experience in agricultural extension work, which is expected to be able to absorb modern technical recommendations for the advancement of date

products The Egyptian area of research and work to transfer it to the farmers so that they can transfer it and implement it on their farms.

**5- Obtaining training courses in the field of date palm cultivation:** the results showed that (6.7%) of the respondents had not been exposed to training courses in the field of date palm cultivation, and that (30%) of the respondents had been exposed to one training course in this field, and that (23%) were subjected to two training courses, and (40%) of the respondents were subjected to three or more training courses in the field of date palm cultivation in the research area. Intensive to cover all operations related to the advancement of Egyptian date products in the research area.

**6- Level of contact with date palm growers in the research area:** It was clear from the results that (30%) of the respondents fall into the category of weak contact with date palm growers in the research area, and that (36.7%) of the respondents fall into the category of medium contact, and that (33.3%) of the The respondents fall into the category of good communication, and these results indicate that (51.6%) of the respondents contact the date palm farmers in the research area to a weak or medium degree, which requires exerting more effort to provide the date palm farmers in the research area with knowledge and information to advance Egyptian date products.

**Table13. Distribution of the respondents from the agricultural extension agents according to their characteristicsPersonal and professional studied (n = 60)**

characteristics Personal and professional studied	Categories	No.	%
1-Age	(under 36 years old)	13	21.7
	(36 to less than 47 yearsold)	20	33.3
	(47 years old and above)	27	45.0
	Arithmeticmean standard deviation		38.22 8.811
2-Originates	rural	40	66.7
	An urban	20	33.3
3- Qualification	Intermediatequalification	31	51.7
	High qualified	29	48.3
4-Experience in agricultural extension	Weak experience (less than 12 years)	12	20.0
	Intermediate experience (12 to less than 22 years)	26	43.3
	Great experience (22 years and above)	22	36.7
	Arithmeticmean standard deviation		10.67 7.901
5- Obtaining training courses in the field of date palm production and trading	Not gettingtrainingcourses	4	6.7
	Getonettrainingcourse	18	30.0
	Gettwottrainingcourses	14	23.3
	Get three training courses and more	24	40.0
	Arithmeticmean standard deviation		1.967 0.991
6-Level of contact with date palm farmers	poor communication (less than 12 degrees)	18	30.0
	Medium communication (from 12 - less than 17 degrees)	22	36.7
	Good communication (17 degrees and above)	20	33.3
	Arithmeticmean standard deviation		14.00 4.98

Source: collected and calculated from the study data sample

#### **B- The performance level of the agricultural extension workers surveyed for the extension activities related to promoting the production and circulation of Egyptian dates:**

It is clear from Table No. (14) the performance level of the agricultural extension agents surveyed for the extension activities related to the advancement of the production and circulation of Egyptian dates. The results showed that with regard to the item providing farmers with knowledge and productive information that (25%) of the

respondents had a low level of performance for extension activities related to this item, while (38.3 %) of them had a medium level of performance, and it was found that (36.7%) of the respondents had a high level of performance.

The results in the same table with regard to the item providing farmers with knowledge and marketing information showed that (41.7%) of the respondents had a low level of performance for extension activities related to this item, while (28.3%) of them had a medium level of performance, and it was found that (30%) of the respondents

was a low level Their performance is high. The results in the same table with regard to the item providing farmers with knowledge and information in the field of controlling the most important pests that infect date palms showed that (10%) of the respondents had a low level of performance for extension activities related to this item, while (56.7%) of them had an average level of performance, and it was found that ( 33.3%) of the respondents had a high level of performance.

It was clear from the results in the same table with regard to the item providing the farmer with knowledge and information to solve the problems they face during the production and marketing of the date crop that 35% of the respondents had a low level of performance for extension activities related to this item, while 35% of them had an average performance level, and it was found That (30%) of the respondents had a high level of performance. The results were shown in the same table with regard to the total performance level of the agricultural extension workers surveyed for the extension activities related to them.

In promoting the production and circulation of Egyptian dates, that (26.7%) of the respondents had a low level of performance for extension activities related to this item, while (40%) of them had a medium level of performance, and it was found that (33.3%) of the respondents had a high level of performance

**The previous results** indicate a clear decrease and a significant weakness of the role of agricultural extension in promoting the production and circulation of Egyptian dates through the weakness of the activities performed by the agricultural extension agents in this regard. It requires the planners and implementers of extension programs to pay attention to this field, follow up the causes of this shortcoming, work to help farmers and play a more effective role in this field, and to take into account what the results of the study showed when planning and implementing extension programs so that the agricultural extension can be promoted and the production and circulation of Egyptian dates.

**Table14. The level of performance of agricultural extension agents respondents guidelines for activities related to promote the production and circulation of Egyptian dates (n = 60)**

Activities	Categories	No.	%
1-Providing farmers with knowledge and productive information:	Low performance (less than 54 degrees)	20	10
	Average performance (from 54 degrees to less than 74 degrees)	38.3	23
	High performance (74 degrees and above)	36.7	22
Arithmetic mean		66.13	
standard deviation		10.699	
2-Providing farmers with knowledge and marketing information:	Low performance (less than 20 degrees)	11.7	20
	Average performance (from 20 degrees to less than 30 degrees)	28.3	17
	High performance (30 degrees and above)	30	18
Arithmetic mean		23.18	
standard deviation		8.706	
3- Providing farmers with knowledge and information in the field of controlling the most important pests that infect date palms:	Low performance (less than 21 degrees)	10	6
	Average performance (from 21 degrees to less than 27 degrees)	56.7	34
	High performance (27 degrees and above)	33.3	20
Arithmetic mean		26.22	
standard deviation		8.307	
4-Providing the farmer with knowledge and information to solve the problems he faces during the production and marketing of the date crop:	Low performance (less than 25 degrees)	30	21
	Average performance (from 25 degrees to less than 46 degrees)	30	21
	High performance (46 degrees and above)	30	18
Arithmetic mean		33.03	
standard deviation		17.023	
5- The total performance level of the agricultural extension workers surveyed for the extension activities related to promote the production and circulation of Egyptian dates	Low performance (less than -2.81 degrees)	26.7	16
	Average performance (from -2.81 degrees to less than 2.19 degrees)	40	24
	High performance (2.19 degrees and above)	33.3	20
Arithmetic mean		3.00	
standard deviation		3.901	

Source: collected and calculated from the study data sample

### C- Determining the extent of the independence of the relationship between the performance level of the agricultural extension agents surveyed for the extension activities related to the advancement of the production and circulation of Egyptian dates and the studied independent variables:

To determine the extent of the independence of the relationship between the performance level of the surveyed agricultural extension agents for extension activities related to the advancement of production and circulation of Egyptian dates and the studied independent variables, the first statistical hypothesis was formulated saying that "there is no dependent relationship with statistical significance between the dependent variable represented in the degree of performance of the surveyed extension activities related to

the advancement of the production and circulation of Egyptian dates and between the studied independent variables."

To test the validity of this hypothesis, the  $\chi^2$  test was used, and the data in Table No. (15) show that there is a relationship between the degree of performance of the surveyed agricultural extension agents for extension activities related to the advancement of the production and circulation of Egyptian dates and all the independent variables in the study sample, namely: age, upbringing, educational qualification, and experience in the field of extension Agricultural training courses in the field of production and circulation of date palms, and the level of communication with date palm farmers, where the significance value of all studied independent variables is less

than (0.05), and based on the above, we accept the alternative hypothesis that the two variables are not independent, and we reject the null hypothesis .

And to determine the severity of the relationship between the level of performance of the agricultural extension workers surveyed for the extension activities related to the advancement of the production and circulation of Egyptian dates and the studied independent variables, namely: age, upbringing, educational qualification, experience in the field of agricultural extension, obtaining training courses in the field of production and handling of date palms, and the level of contact with farmers Date palm The concordance coefficient was calculated, and it was found that it is (0.721, 0.707, 0.620, 0.701, 0.749, 0.803), respectively, which indicates a relatively strong relationship.

#### Eighth: The most important problems and obstacles facing agricultural extension agents when performing their role and proposals to solve them:

shown 29 obstacles that agricultural extension agents may face when performing their role in the field of promoting the production and circulation of Egyptian dates, and proposals for solving them were presented. Table (16) shows that the most important five problems or production obstacles that may face the agricultural extension agents surveyed with a high degree in descending order as follows:

- 1- The absence of a clear guiding policy to advance the production and circulation of Egyptian dates, which was mentioned by 93.3% of the respondents.
- 2- Weakness of the extension role provided to farmers to develop their productive skills, and this was indicated by 91.7% of the respondents.
- 3- The farmers' adherence to inherited experiences, environmental customs and traditions, and their lack of

cooperation with agricultural extension agents, and that the agricultural guide cannot persuade farmers to implement agricultural innovations, and this was mentioned by 88.3%.

- 4- Weak coordination between agricultural extension and specialized scientific research to address production obstacles that affect the quality of the product exported from dates, and this was explained by 86.7% of the respondents.
- 5- Lack of adequate training of agricultural extension agents on good agricultural practices and integrated management to control palm pests, and between that 75%, These results indicate the importance of hard and diligent work to solve these problems, especially since most of them are due to a deficiency in the extension system and some external factors that are difficult to control and deal with. The most important solution proposals were the importance of having a guiding strategy to develop farmers' knowledge of the market and train them to produce quality and provide material support and morale for them to solve their problems and develop their skills, as indicated by about 93.6%, followed by the implementation and application of good agricultural practices and involvement in quality systems. GLOBAL GAP, the application and development of the organic farming system, mentioned that about 83.3%, followed by the proposal to pay attention to the extension seminars for farmers to develop awareness for the advancement of the Egyptian dates sector locally and internationally, and a proposal to rehabilitate and rejuvenate small farms and the work of model farms in each oasis at a rate of 81.7% for each who are they .

**Table15. Values of the " $\chi^2$ " between the total performance level of the agricultural extension workers surveyed for the extension activities related to the promotion of production and circulation of Egyptian dates and some of their studied characteristics**

The level of performance of agricultural extension agents respondents guidelines for activities related to promote the production and circulation of Egyptian dates																			
Characteristics	Categories	Low performance (less than -2.81 degrees)				Average performance (from -2.81 to less than 2.19 degrees)				High performance (2.19 and above)		Total	X <sup>2</sup>	degrees of freedom	Pearson's R	Spearman Correlation	Contingency Coefficient		
		NO.		%		NO.		%		NO.								%	
1-age	(under 36 years old)	.	.	.	.	13	21.7	13	21.7	60.00	4	.804	.808	.721					
	(36 to under 47 years old)	.	.	18	30	7	11.7	20	33.3										
	(47 years and over)	16	26.7	7	11.7	.	.	22	36.7										
Total		16	26.7	25	41.7	20	33.3	60	100										
2-Originates	rural	16	26.7	25	41.7	.	.	40	66.7	60.00	2	.800	.808	.707					
	An urban	.	.	.	.	20	33.3	20	33.3										
	Total	16	26.7	25	41.7	20	33.3	60	100										
3- Qualification	Intermediate qualification	16	26.7	10	16.7	.	.	26	43.3	37.470	2	.781	.784	.720					
	High qualified	.	.	9	15	20	33.3	29	48.3										
	Total	16	26.7	19	31.7	20	33.3	55	91.7										
4-Experience in agricultural extension	Weak experience (less than 12 years)	.	.	.	.	13	21.7	13	21.7	07.80	4	.820	.828	.701					
	Intermediate experience (12 to 20 years)	1	1.7	17	28.3	7	11.7	20	33.3										
	Total	1	1.7	18	30	20	33.3	38	63.3										

		to less than 22 years)													
		Great experience (22 years and above)	10	20	30	40	50	60	70	80	90	100			
Total			16	26.7	24	40	20	33.3	70	100					
5- Obtaining training courses in the field of date palm production and trading	Not getting training courses	4	7.7	0	0	0	0	4	7.7	77.767	6	0.882	0.891	0.749	
	Get one training course	12	20	7	10	0	0	18	30						
	Get two training courses	0	0	14	23.3	0	0	14	23.3						
	Get three training courses and more	0	0	4	7.7	20	33.3	24	40						
Total			16	26.7	24	40	20	33.3	70	100					
6-Level of contact with date palm farmers	poor communication (less than 12 degrees)	16	26.7	2	3.3	0	0	18	30	100.89	4	0.974	0.976	0.803	
	Medium communication (from 12 - less than 17 degrees)	0	0	22	36.7	0	0	22	36.7						
	Good communication (17 degrees and above)	0	0	0	0	20	33.3	20	33.3						
Total			16	26.7	24	40	20	33.3	70	100					

**Source:** Data were collected from questionnaires of field study data.

**Table 16. Obstacles and problems of productivity, marketing and export facing agricultural extension agents (respondents) to promote the production and circulation of Egyptian dates and proposals to solve**

productivity problems					
The problem / disabled	NO.	%	Solution Suggestions	No.	%
•The absence of a clear guiding policy for the advancement of the production and circulation of dates globally	56	93.33	• directing the production of dates towards varieties that meet consumer expectations locally and internationally	42	70
•Weak awareness of the importance of the role of agricultural extension in the development of the Egyptian dates sector locally and internationally	35	58.33	• Paying attention to the extension seminars for farmers to develop awareness for the advancement of the Egyptian dates sector locally and internationally	49	81.67
• Farmers' adherence to inherited experiences, environmental customs and traditions, and their lack of cooperation with agricultural extension agents.	53	88.33	• The necessity of implementing and applying good agricultural practices and engaging in GLOBAL GAP quality systems, and applying and developing the organic farming system for the advancement of the industry	50	83.33
•Lack of adequate training, agricultural extension agents on good agricultural practices and integrated management of pest control palm	45	75.00	• Paying attention to production processes, especially the service of the head of the palm tree (pruning - gaggings - pollination - slipping ...), as well as adjusting the cultivation distances to improve field planning and equipping the field with a modern irrigation network (Edited)Restore original	38	63.33
• The lack of trained agricultural labor and the high wages of agricultural labor The reliance of the harvesting process on traditional methods	36	60.00	• Training and rehabilitation of farmers and companies and the use of modern methods of harvesting to reduce waste.	37	61.67
•Expansion of supervision for the guides with their small number.	22	36.67	• The state directs to appoint new agricultural extension agents to keep pace with the strategic plan for development	48	80
•The negative attitude of the farmer towards the guide	25	41.67	• Developing awareness of the importance of the role of agricultural extension in the development of the Egyptian dates sector locally and internationally, for farmers' cooperation with the agricultural sector	34	56.67
•Palm trees exceed the age limit for production	46	76.67	• Rehabilitation and rejuvenation of small farms and the creation of model farms in each oasis	49	81.67
•Weak coordination between agricultural extension and specialized scientific research, to address production obstacles that affect the quality of the exported product from dates	52	86.67	• Implementation and application of good agricultural practices and involvement in quality systems. "GLOBAL GAP", the application and development of the organic farming system	50	83.33
•Lack of information and knowledge about the internationally required varieties (specifications of export dates)	44	73.33	• Identifying suitable varieties for foreign markets and encouraging their cultivation	30	50
•Weakness of the financing capabilities necessary to improve the quality of production	29	48.33	• Providing financial support and obtaining agricultural loans from agricultural lending institutions at appropriate interest rates	22	36.67
•The lack of integrated management of pest control in the palm and date sector and the spread of infestation of various pests, especially the red palm weevil and the piercing date beetle	41	68.33	• Training on integrated control programs to protect palms and dates from pests (insects that infect dates and red palm weevil)	30	50.33
•Weakness of the guiding role provided to farmers to develop their productive skills	55	91.67	Availability of a guiding strategy to develop farmers' knowledge of the market, train them on quality production, and provide material and moral support to them to solve their problems and develop their skills.	56	93.33
Marketing and export problems					
The problem / disabled	NO.	%	Solution Suggestions	No.	%
•The high percentage of crop losses	51	85	•General use of plastic boxes for packaging dates. This is done by involving the owners of the packing factories and those who buy from the producers	53	88.33
• Unavailability of packages and their high price	45	75			
Cont. Table 14.					
• Control of traders and brokers, fluctuation in dates prices	22	36.67	• The need to establish a collective organization for dates to assist producers and processors of dates and control them as in the New Valley, and to increase the financing capacity of farmers	35	58.33
• The lack of quality of the exported raw product and the export of stored products from the previous year	44	73.33	• Facilitating and urging the establishment of units for freezing dates. Spreading and selling wet dates at the required time in order to preserve the taste characteristics of wet dates.	25	41.67
Seasonality of exports at specific times of the year and storage for the rest of the year due to a large surplus	49	81.67	• Encouraging the establishment of new filling plants in some areas in order to absorb surplus production	36	60.00
•The distance to some places of production and the	56	93.33	• Working to find assembled cold chains in each area in which the farms.	53	88.33



difficulties of transportation and storage, which increases export costs, as in Siwa Oasis and others			warehouse or complex and factory participate.		
• The limited number of export companies interested in exporting dates	٣٤	56.67	• Encouraging companies exporting dates and providing them with technical and financial support. Increasing the level of competitiveness for date export companies, and participating in international exhibitions and the Dates Festival in the New Valley Governorate	44	٧٣.٣٣
• The biggest obstacle to marketing dates is the presence of insects inside them	٤٩	81.67	• Promote the integrated management of pests and the red palm weevil in the palm and date sector, and train extension workers and farmers on it.	29	٤٨.٣٣
• Packing and transporting dates to factories incorrectly in ways that are not subject to the quality and health rules applicable in food processing.	٥٥	٩١.٦٧	• It is necessary to use plastic boxes and containers, which are suitable means of packing, valid for use or recovery for a period of three to four years.	53	٨٨.٣٣
• the farmer does not have sufficient means to know the requirements of the market, and is a broker barrier between the product and the consumer.	22	36.67	• Providing adequate support for the extension system and training them to develop farmers' knowledge of market requirements, specifications and product quality to compete in global markets	44	٧٣.٣٣
• There are no monitoring points in the markets to record market data such as the volume of sold quantities and selling prices	٤٤	73.33	• The necessity of establishing markets for dates in which there is a permanent office for quality control of transactions	29	٤٨.٣٣
• The absence of a prior export policy. Marketing is based mainly on individual judgments of major producers and manufacturers	٥٤	٩٠	• Adopting a national strategy for marketing and exporting Egyptian dates and establishing an institutional entity to advance the Egyptian dates sector	41	٦٨.٣٣
• The inefficiency of manufacturing processes in local factories in a manner that suits global markets	٣٥	٥٨.٣٣	• Improving the industrial infrastructure	55	٩١.٦٧
• The reluctance of companies to adapt to the Chinese conditions that crystallize in applying and registering with the Agricultural Crops Export Council, and that the number of companies that can export to China is currently 4 companies	١٥	٢٥	• To allow date exporters and date palm growers in Egypt to export dates to China	٨	١٣.٣٣

**Source:** Data were collected from questionnaires of a sample study

- With regard to the marketing and export problems, the most important of which were the distance to some production places and the difficulties of transportation and storage, which increases export costs, as in Siwa Oasis and others. About 93.33% indicated that, followed by packing and transporting dates to factories incorrectly in ways that are not subject to quality and health rules in force in manufacturing Food. by 91.7%, and 90% indicated that there is no prior export policy. Marketing is based mainly on individual judgments of major producers and processors, then about 85% of the respondents mentioned the high percentage of crop losses, and 81.7% indicated that the biggest obstacle to marketing dates was the presence of insects inside them.
- The most important proposals to address these obstacles were to improve the industrial infrastructure, using technology to package dates, which is the main means of competition, giving dates an added value in the market. About 91.7% of the respondents indicated this, and about 88.3% of the respondents mentioned three proposals: the need to work on finding cold chains Collected in each area in which the farmer, warehouse or complex and factory participate, and also suggested the use of plastic boxes and containers, which are suitable means of packaging valid for use or recovery for a period of three to four years., Generalizing the use of plastic boxes for packaging dates. This is done by involving the owners of packing factories and those who buy from the producers.

About 77.3% of the respondents mentioned the need to provide adequate support to the extension system and train them to develop farmers' knowledge of market requirements, specifications and product quality to compete in global markets, as well as encourage companies exporting dates and provide technical and material support to them. Increasing the level of Competitiveness of date export companies, participation in international exhibitions and dates festival in the New Valley Governorate. Finally, 68.3% of the respondents mentioned adopting a national strategy for marketing and exporting Egyptian dates and establishing an institutional entity to advance the Egyptian dates sector as in Tunisia (Joint Professional Complex for Dates).

### Recommendations:

- 1- Paying attention to production processes, especially the service of the head of the palm tree (pruning - gagging - pollination - slippers...) and developing the skills of both extension workers and farmers in the date palm production areas.
- 2- Adequate training of agricultural extension agents on good agricultural practices and on integrated management to control palm pests
- 3- Existence of a marketing apparatus at a national level to set a well-defined strategic policy for date exports annually, based on adequate studies of the actual needs of the markets according to the tastes of the consumers of each country separately, and the need to conduct detailed marketing studies on these markets and to identify the tastes of consumers and the best dates for export And the specifications they prefer in the form of packaging and advertising campaigns for Egyptian dates so that our Egyptian dates reach the world.
- 4- Establishing a new system to develop the value-added chain for dates, in areas where palm plantations abound, and marketing coordination between farmers and between factories and traders.
- 5- Exploiting the opportunity to open Chinese markets and adapting to the Chinese conditions that crystallize in applying and registering with the Export Council for Agricultural Crops, then inspecting the Chinese delegation of the farm before it is included in the export system to China, and finally the lack of cultivated areas with the varieties required by China compared to other types of other items.
- 6- Encouraging companies exporting dates, providing them with technical and material support, and participating in international exhibitions and festivals, so that our products can access the most important global markets.

### REFERENCES

- Abdel-Aal, H. E. I. A. and A. A. A. Risha : Knowledge Gap for Agricultural Extension Workers in Field of Minimizing Loss of Date Crop in Siwa Oasis, Agricultural Extension Department, Department of



- Economic and Social Studies, Desert Research, J. Agric. Econom. and Social Sci., Mansoura Univ., Vol. 9 (5): 445 - 452, 2018
- Adel Al-Ghandour and others, The National Project for Cultivation of Date Palm Trees in Egypt, Horticultural Research Institute. Ministry of Agriculture, September 2019.
- Allqh, Mohamed Ramadan Ismail, commercial obstacles facing Egyptian agricultural exports, a PhD, Department of Agricultural Economics, Faculty of Agriculture, Zagazig University, 2009.
- Central Agency for Public Mobilization and Statistics, unpublished data.
- Directorate of Agriculture, New Valley Governorate - Information and Decision Support Center-2020.
- FAO,(1990)Comparative advantage and Competitiveness Of Crops. Crop Rotation and Livestock Products in Egypt Regional Office for the Near East Cairo.
- Fawaz, Mahmoud Mohamed and, Suleiman, Sarhan Ahmed: The competitiveness and export efficiency of Egyptian potatoes in global markets with a focus on the Russian market, Mansoura University, Faculty of Agriculture, Journal of Agricultural Economics and Social Sciences, Volume (7), Number (2)
- Food and Agriculture Organization of the United Nations, Strategy for the Development of the Date Palm Sector in Egypt, October 2018
- HananMahamed Mahmoud Bahgat :The Competitiveness of the Export of Egyptian Datesin the World Markets, The Egyptian Journal of Agricultural Economics - Volume 30 - Issue One - March 2020
- <http://faostat.fao.org>.
- j.c.Abbott and j.p.Makeham Agricultural Economics and Marketing in the tropics, Funded by the British Government, Second Edition, 1990.
- Krejcie , R .V and Morgan , D.W : Determining sample size for reasearch activities eductional and psychological measurement , college station Urham , North Carolina , 1970.
- Ministry of Agriculture and Land Reclamation, Central Administration for Agricultural Extension, "The Cultivation and Production of Date Palms", Technical Bulletin, Cairo, 2020.
- Ministry of Agriculture and Land Reclamation, Economic Affairs Sector, Central Administration of Agricultural Economy, Bulletin of Agricultural Economics, various issues.
- Munira Jalal Al-Najjar, The Competitive Position of Egyptian Dates in Foreign Markets, The Egyptian Association For Agricultural Economics, Journal of Agricultural Economics, Volume (29), Issue (1), 2019 .
- Porter, M. E., Competitive Advantage of Nations, MacMillan press LDS, 1990.
- Shalaby, RagaaHamed, Michael, Mary Bushra, Abdel Ghani, Mohamed Abdel Dayem Nasser, Performance of Agricultural Guides in Kafr El-Sheikh Governorate, Journal of Agricultural Research, Faculty of Agriculture, Kafr El-Sheikh University, Volume (39), No. (1), 2013.
- UN COMTRADE statistics
- World Trade Organization website-[www.comtrade.un.org](http://www.comtrade.un.org).

## تحليل الأداء التنافسي للتمور المصرية في الأسواق العالمية في ضوء إستراتيجية إرشادية لتطوير الأداء الإرشادي الزراعي لإنتاج وتداول التمور المصرية (دراسة حالة بمحافظة الوادي الجديد)

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يعتبر نخيل البلح من أشجار الفاكهة التي يمكن الاستفادة منها اقتصاديا وإمكانية التصدير والتصنيع وزيادة الدخل الأسري في مناطق إنتاجه في مصر وبنها زيادة الدخل القومي المصري، ويستهدف البحث تحليل الأداء الإنتاجي والتنافسي والإرشادي للتمور المصرية، للوقوف على مضعاف القوة الحافظة عليها وتنميتها، والتعرف على مضعاف أوجه القصور التبادلية، واقتراح الأساليب التي يمكن إتباعها لتنمية الصادرات من التمور المصرية في المستقبل، وأوضح النتائج باستعراض أهم مؤشرات القدرة التنافسية للتمور المصرية تبين أن مؤشر الميزة النسبية الظاهرة زادت قيمته عن الواحد الصحيح في متوسط الفترة (٢٠٢٠-٢٠١٥) قدر بنحو ٥.٥٥ % مما يعني أن صادرات التمور المصرية تتمتع بميزة نسبية في الأسواق العالمية. وكانت الكفاءة التصديرية للتمور المصرية خلال الفترة (٢٠٢٠-٢٠١٥) نسبتها أكبر من ١٠٠ % حيث أن المتوسط السنوي للكفاءة التصديرية بلغ نحو ٣٨٤.٣ % الأمر الذي يشير إلى وجود كفاءة تصديرية للتمور المصرية، كما أشارت النتائج أن نصيب مصر في السوق الأندونيسي بلغ نحو ٤٠.٦٣ %، بينما بلغ نحو ٠.٠٢ % في السوق المغربي، ونحو ١٢.٢٢ % في السوق الماليزي وذلك خلال متوسط الفترة (٢٠٢٠-٢٠١٥) وهذه النسب تدل على زيادة الإقبال على المنتج المصري وإمكانية تنمية الوضع التنافسي للتمور المصرية خاصة في السوق الماليزي والسوق الأندونيسي نظراً لأنها دول غير منتجة للتمور. وبينت النتائج عند قياس إجمالي مستوى أداء المرشدين الزراعيين المبحوثين للأنشطة الإرشادية المتعلقة بالنهوض بالتجارة وتداول التمور المصرية أن (٢٦.٧ %) من المبحوثين مستوي أدائهم للأنشطة الإرشادية الخاصة بهذا البند منخفض، بينما (٤٠ %) منهم كان مستوي أدائهم متوسط، وتبين أن (٣٣.٣ %) من المبحوثين كان مستوي أدائهم مرتفع.